

# PATENT ABSTRACTS OF JAPAN

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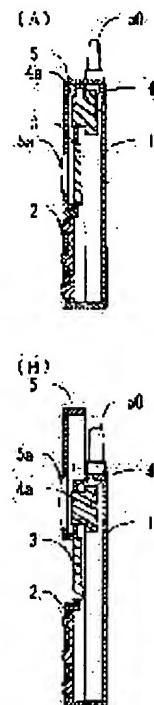
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## (54) MOBILE VIDEO COMMUNICATION TERMINAL

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To protect the lens of an electronic camera and to prevent the image pickup element from being burned out by shielding an external light in the case that the terminal is not in operation.

**SOLUTION:** The lens 4a of an electronic camera 4 is placed above a display section 3, which is provided with a transparent window 5a corresponding to the display section, a cover 5 protecting the lens of the electronic camera is fitted freely slidably in a vertical direction. When the cover is slid upward to move the transparent window to an upper part of the display section, the transparent window comes at the position of the lens of the electronic camera. Thus, the cover shields an external light incident onto the electronic camera so as to prevent an image pickup element from being burnt out and to make the display section usable when the lens is covered. When the cover is moved upward to bring the electronic camera to a photographing state, since the transparent window covers the lens, dirt on or a flaw of the lens can be prevented.



## LEGAL STATUS

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**DETAILED DESCRIPTION**

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**[Detailed Description of the Invention]****[0001]**

[Field of the Invention] Especially this invention relates to what prevented burning of an image sensor while protecting the lens of an electronic camera with respect to a pocket image communication terminal.

**[0002]**

[Description of the Prior Art] Conventionally, in a body case, at least, while displaying a control unit, the display which displays an image, the image which was equipped with the electronic camera which photos an image and was photoed with this electronic camera on this display He arranges the liquid crystal display section 3 to a control unit 2 and its upper part, and was trying for the pocket image communication terminal transmitted through a cellular-phone circuit to arrange an electronic camera 4 and an antenna 50 in the lower part of the body case 1 in the upper part, as shown in drawing 7. However, since there was nothing, and a lens was soiled or ON light of the outdoor daylight was carried out from lens 4a regardless of operation of about [ damage ] and this electronic camera and un-working, some which protect said electronic camera 4 had the problem that a CCD component (image sensor) might be damaged by fire.

**[0003]**

[Problem(s) to be Solved by the Invention] While this invention solves the trouble described above and protecting the lens of an electronic camera, it aims at offering the pocket image communication terminal which interrupts outdoor daylight and prevented burning of an image sensor at the time of un-working.

**[0004]**

[Means for Solving the Problem] In order that this invention may solve an above-mentioned technical problem, while displaying a control unit, the display which displays an image, the image which was equipped with the electronic camera which photos an image and was photoed with this electronic camera on this display, at least in a body case While being the pocket image communication terminal transmitted through a cellular-phone circuit and arranging the lens of said electronic camera above said display If have a transparent aperture corresponding to said display, it comes to attach covering which protects the lens of said electronic camera free [ vertical sliding ], it slides on this covering up and said transparent aperture is moved above said display \*\*\*\*\* is considering as the pocket image communication terminal by which it was made to come to the location of the lens of said electronic camera.

[0005] While establishing the guide slot in alignment with a parting line in the side-face upper part of said body case; it is considering as the pocket image communication terminal which bent said covering to the U shape, formed the side face, bent this side-face tip inside, and prepared the rail corresponding to said guide slot.

[0006] While preparing a projection at the tip of abbreviation of said rail, it is considering as the pocket image communication terminal which prepared the stop section which becomes said guide slot by the heights of a vertical pair, and fits this projection into a crevice in the meantime.

[0007] Said stop section is prepared in two places, and it is considering as the pocket image communication terminal which said covering had said display stopped by the transparent aperture, and was made to stop a wrap location and the lens of said electronic camera in a wrap location.

[0008] A switch is formed in the crevice across which it faced by the heights of said pair, and when said projection switches on and turns off this switch, it is considering as the pocket image communication terminal which controlled actuation of said electronic camera.

[0009] When division formation of the upper part of said body case and the electronic camera hold section is carried out, rotation is made free and it slides on said covering up, the electronic camera hold section is considering as the pocket image communication terminal it was made to rotate with covering.

[0010] While extending the side face of said covering caudad, forming a stop pawl at the tip of this extension section and preparing the hold section which holds this extension section in said body case, it is carrying out as the pocket image communication terminal which prepared the stop section which stops said stop pawl, and the stop discharge section which cancels a stop of this stop pawl.

[0011] It is considering as the pocket image communication terminal which prepared the coil spring which energizes said extension section tip up in said body case.

[0012]

[Embodiment of the Invention] As mentioned above, it sets to the pocket image communication terminal of this invention. While arranging the lens of an electronic camera above a display, it has a transparent aperture corresponding to said display. if covering which protects the lens of said electronic camera is attached free [ vertical sliding ], it slides on this covering up and said transparent aperture is moved above said display -- \*\*\*, since it was made for a transparent aperture to come to the location of the lens of said electronic camera While shading ON \*\*\*\*\* diplomacy to an electronic camera in the condition of having covered and preventing burning of an image sensor Even when remain as it is, and a display can be used, and covering is moved up and it changes into the condition which can be photoed, a lens can be prevented by the transparent aperture and dirt and with a blemish can be prevented by that of a wrap. [ of a lens ]

[0013]

[Example] Hereafter, based on a drawing, the pocket image communication terminal by this invention is explained to a detail. Drawing 1 is the important section sectional side elevation showing one example of the pocket image communication terminal by this invention, and the condition which (A) closes covering and does not use an electronic camera, and the condition of (B) opening covering and using an electronic camera are shown. Drawing 2 is the external view showing one example of the pocket image communication terminal by this invention, and the front view in the condition that the front view in the condition that (A) does not use an electronic camera, and (B) use this side elevation, and (C) uses an electronic camera, and (D) are these side elevations. In drawing, the electronic camera with which a control unit and 3 are equipped with the liquid crystal display section, and, as for 4, a body case and 2 are equipped with lens 4a by 1, and 5 are coverings attached in the body case 1 free [ sliding ] up and down. transparent aperture 5a corresponding to said liquid crystal display section 3 in this covering 5 -- having -- \*\*\*\* -- \*\* -- transparent aperture 5a -- usually -- drawing 1 - (A) or drawing 2 -, although the front face of said liquid crystal display section 3 is covered as shown in (A) and (B) By moving this covering 5 up, it is drawing 1 . - (B) or drawing 2 - He moves to the location of lens 4a of an electronic camera 4, and is trying to cover the front face of a lens, as shown in (C) and (D).

[0014] Drawing 3 is the perspective view showing other examples of the pocket image communication terminal by this invention, (A) shows the whole equipment and (B) shows covering 5. As shown in drawing, while preparing guide slot 1c in alignment with parting line 1b in the side-face upper part of the body case 1, said covering 5 was bent to the U shape, side-face 5b was formed, this side-face 5b tip was bent inside, and rail 5c corresponding to said guide slot 1c is prepared. While forming projection 6 at the tip of abbreviation of this rail 5c, the stop section 7 which is set to said guide slot 1c by heights 7a of a vertical pair, and fits this projection 6 into crevice 7b in the meantime is formed. the location where said liquid crystal display section 3 is stopped at transparent aperture 5a, and, as for this stop section 7, said covering 5 stops a wrap location and lens 4a of said electronic camera 4 at a wrap location -- he is

trying to prepare two places like And a switch 8 is formed in crevice 7b inserted by heights 7a of this pair, and when said projection 6 switches on and turns off this switch 8, he is trying to control actuation of said electronic camera 4.

[0015] The appearance perspective view and drawing 5 which show other examples of the pocket image communication terminal according [ drawing 4 ] to this invention are this important section decomposition perspective view. As shown in drawing, when division formation of the upper part of said body case 1 and the electronic camera hold section 11 is carried out, rotation is made free and it slides on said covering 5 up, the electronic camera hold section 11 has formed the rotation section 9 which rotates with covering 5. As shown in this rotation section 9 at drawing 5 , while preparing 1f of crevice 1e heights on 1d of coaxial receiving parts around [ which was established in the body case 1 side ] 1d of bearings, and a concentric circle, he prepares projection 11a which fits into this crevice 1e in said electronic camera hold section 11, and is trying for the direction of an electronic camera 4 to stop at a position (positive and backward).

[0016] Drawing 6 is the important section sectional view showing other examples of the pocket image communication terminal by this invention. As shown in drawing, while extending caudad side-face 5b of said covering 5, preparing stop pawl 5e at the tip of 5d of these extension sections and preparing 1g of hold sections which hold 5d of these extension sections in said body case 1, stop release button 1i which cancels 1h of stop sections which stop said stop pawl 5e, and the stop of this stop pawl 5e is prepared in the side face of the body case 1. And the coil spring 10 which energizes 5d tip of said extension sections up in said body case 1 is formed.

[0017] In the above configuration, the actuation is explained below. With reference to drawing 2 , drawing 3 , and drawing 4 , the 1st invention is explained first. It is drawing 2 when carrying this pocket image communication terminal as non-operating status. - As shown in (A) and (B), it slid on covering 5 caudad and lens 5a of an electronic camera 4 was shaded, and it has covered so that transparent aperture 5a may come to the front face of the liquid crystal display section 3. In this condition, if a power source is turned on, it can be used as a usual cellular phone, and also the image sent through this cellular-phone circuit can be projected in the liquid crystal display section 3, and transparent aperture 5a can be spaced and seen. Next, it is drawing 2 in order to photo a target image using an electronic camera 4. - It slides on covering 5 up and is made for transparent aperture 5a to come to the front face of lens 5a of the upper electronic camera 4 of the liquid crystal display section 3, as shown in (C) and (D). Then, since said switch 8 will be turned on and an electronic camera 4 will be in an operating state, a photograph can be taken [ for the purpose of lens 5a ]. In the case of the example of drawing 4 , it is in the condition which slid on covering 5 up, and since the camera hold section 11 can be rotated and lens 5a can be turned to the opposite direction of the liquid crystal display section, a photograph can be taken easily, checking the image photoed in the liquid crystal display section.

[0018] Below, the actuation is explained about the example of drawing 6 . Since covering 5 is always energized up with the coil spring 10 in the case of this example, it is drawing 6 . - As shown in (A), by pushing stop release button 1i \*\*, stop pawl 5e separates from stop release button 1i, covering 5 is moved up, and where covering 5 is closed, as mentioned above, photography becomes possible. When carrying out photography termination, covering 5 is locked by the body case 1 by depressing covering 5 until it stops stop pawl 5e to stop carbon button 1i.

[0019]

[Effect of the Invention] As explained above, while arranging the lens of an electronic camera above a display according to the pocket image communication terminal by this invention If have a transparent aperture corresponding to said display, covering which protects the lens of said electronic camera is attached free [ vertical sliding ], it slides on this covering up and said transparent aperture is moved above said display Since it was made for \*\*\*\*\* to come to the location of the lens of said electronic camera While shading the outdoor daylight which carries out ON light to an electronic camera in the condition of having covered and preventing burning of an image sensor, even when a display can be used, and covering is moved up and it changes into the condition which can be photoed, a lens can be prevented by the transparent aperture and dirt and with a blemish can be prevented by that of a wrap.

[ of a lens ]

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[Translation done.]

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**DESCRIPTION OF DRAWINGS**

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**[Brief Description of the Drawings]**

[Drawing 1] The important section sectional side elevation showing one example of the pocket image communication terminal by this invention shows the condition which (A) closes covering and does not use an electronic camera, and the condition of (B) opening covering and using an electronic camera.

[Drawing 2] It is the external view showing one example of the pocket image communication terminal by this invention, and the front view in the condition that the front view in the condition that (A) does not use an electronic camera, and (B) use this side elevation, and (C) uses an electronic camera, and (D) are these side elevations.

[Drawing 3] With the perspective view showing other examples of the pocket image communication terminal by this invention, (A) shows the whole equipment and (B) shows covering 5.

[Drawing 4] It is the appearance perspective view showing other examples of the pocket image communication terminal by this invention.

[Drawing 5] It is the important section decomposition perspective view showing other examples of the pocket image communication terminal by this invention.

[Drawing 6] It is the important section sectional view showing other examples of the pocket image communication terminal by this invention.

[Drawing 7] It is the outline external view showing the conventional pocket image communication terminal.

**[Description of Notations]**

1 Body Case

1a

1b Parting line

1c Guide slot

1d Bearing

1e Crevice

1f Heights

1g Hold section

1h Stop section

1i Stop release button

2 Control Unit

3 Liquid Crystal Display Section

4 Electronic Camera

4a Lens

5 Covering

5a A transparent aperture

5b Side face

5c Rail

5d Extension section

5e Stop pawl  
6 Projection  
7 Stop Section  
7a Heights  
7b Crevice  
8 Switch  
9 Rotation Section  
10 Coil Spring  
11 Electronic Camera Hold Section

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[Translation done.]

**\* NOTICES \***

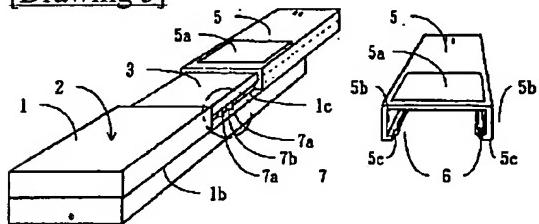
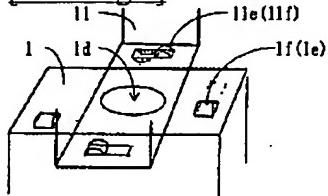
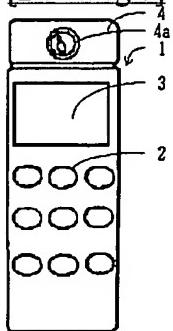
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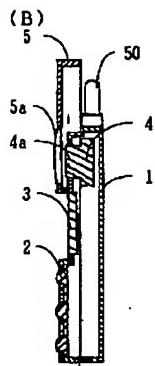
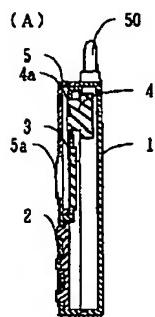
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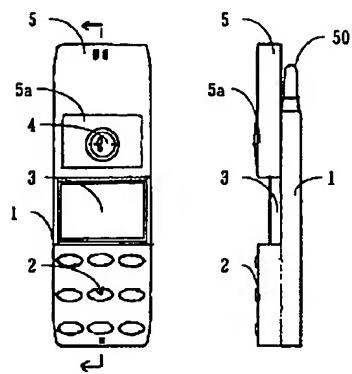
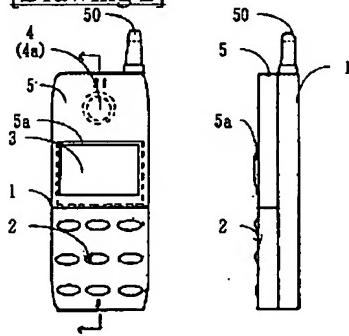
**DRAWINGS**

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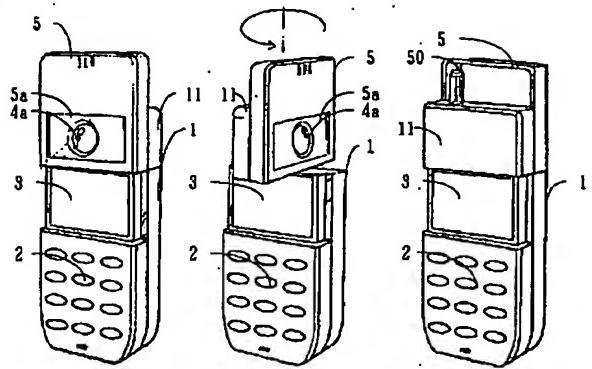
**[Drawing 3]****[Drawing 5]****[Drawing 7]****[Drawing 1]**



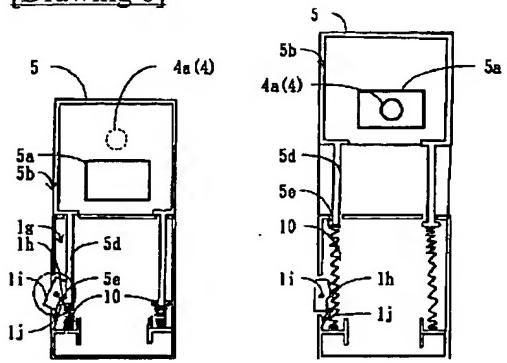
[Drawing 2]



[Drawing 4]



[Drawing 6]



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[Translation done.]